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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte HEWLETT-PACKARD DEVELOPMENT
COMPANY, L.P.¹

Appeal 2016-002629
Application 14/262,043²
Technology Center 1700

Before ROMULO H. DELMENDO, MARK NAGUMO, and
DONNA M. PRAISS, *Administrative Patent Judges*.

PRAISS, *Administrative Patent Judge*.

DECISION ON APPEAL³

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's
decision to finally reject claims 1–13. Claims 1–13 stand rejected under

¹ The named inventor is Mark D. Senatori.

² The real party in interest is identified as Hewlett-Packard Development Company, L.P., a wholly owned affiliate of Hewlett-Packard Company having HPQ Holdings, LLC as a general or managing partner. App. Br. 2.

³ In this decision, we refer to the Specification filed April 25, 2014 as amended Oct. 17, 2014 (“Spec.”), the Final Office Action appealed from dated Jan. 26, 2015 (“Final Act.”), the Appeal Brief filed June 12, 2015

35 U.S.C. § 103(a) as unpatentable over Meyer⁴ and Halder⁵ and other references. Final Act. 3–12.

We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

The claims are directed to a method for removing particulates from an airflow. Claim 1 is representative (subject matter in dispute italicized):

1. A method, comprising:

generating an airflow;

filtering, by a filter, to remove particulates from the airflow directed toward a heat exchanger, wherein the heat exchanger is thermally coupled to a computing component;

directing the airflow through the heat exchanger while a blade is in a first blade position;

transitioning the blade from the first blade position to a second blade position so as to move a latch from a latch-closed position, precluding particulates removed from the airflow from entering an exhaust chute, to a latch-open position, allowing particulates removed from the airflow into the exhaust chute, *the blade being shaped so that, when in the second position, the blade covers a majority of the filter and directs the airflow so that the airflow carries at least some of the particulates into the exhaust chute*; and

exhausting the particulates in response to the transitioning.

Claims App’x at App. Br. 11.

(“App. Br.”), the Examiner’s Answer dated Oct. 8, 2015 (“Ans.”), and the Reply Brief dated Nov. 25, 2015 (“Reply Br.”).

⁴ Meyer et al., US 4,976,098, issued Dec. 11, 1990 (“Meyer”).

⁵ Halder, US 4,737,172, issued Apr. 12, 1988 (“Halder”).

OPINION

We need to address only independent claim 1 because each of the rejections is based on the same combination of Meyer with Halder, and, specifically, the Examiner's finding that Halder discloses a blade that "directs the airflow so that the airflow carries at least some of the particulates into the exhaust chute." Final Act. 4–6 (citing Halder 3:35–42).

Appellant contends that the Examiner's rejection of claim 1 is in error, *inter alia*, "[b]ecause Halder does not have an open exhaust chute, the particulates removed from Halder's filter [are] not carried into the exhaust chute by the airflow of Halder." App. Br. 7. According to Appellant, "there is no direct fan airflow across [Halder's] opening 24 as it is blocked by stripper 6' and thus it is stripper 6' that actually directs particulates removed into the exhaust chute and not the airflow." *Id.* Appellant further contends that

Halder has designed the elastic lips 25 to "hug the stripper 6' or the rod 15' and close together upon retraction of the stripper to thereby prevent escape of the solids from the collection space 4 (col. 3, lines 40–43). Thus Halder's description confirms that a transverse Bernoulli effect exists (due to the increase airflow through the unblocked filter and the closed exhaust container and no airflow where the filter is blocked) and thus Halder's blade (the stripper 6') does not direct "the airflow so that the airflow carries at least some of the particulates into the exhaust chute" as Applicant is claiming."

Id.

The Examiner responds that:

There is no indication that the blade 6' seals the opening to the chute 25 when the blade 6' forces particulate matter into the chute 4. Rather, it appears that the opening of the chute 25 is unsealed because a plate 5' (which forms part of the blade) blocks particulate matter from forming on the portion of the filter

being cleaned 3. Additionally, air is able to move through the non-cleaned portion of the filter 2 even though the plate 5' blocks the portion being cleaned 3 (column 3, lines 47–58).

Because air moves through the device when particulate matter is forced by the blade 6' into the chute 4, this air flow will contribute at least slightly to moving particulate matter into the chute 4. The blade 6' will not prevent air from flowing into the chute 4 because there is no indication that the blade 6' seals the opening to the chute 4.

Furthermore, the Examiner takes the position that at least a portion of the airflow is required to move a portion of the particulate matter into the chute 4. Air moves from areas of high pressure to areas of low pressure. Therefore, the pressure on the exterior of the chute 4 must be greater than the pressure inside the chute 4 in order for particulate matter to move into the chute. This high pressure on the outside of the chute 4 is provided by the airflow moving through the device.

Ans. 15.

In the Reply Brief, Appellant argues that the width of Halder's blade is wider than the opening of the elastic lips and that Halder discloses the elastic lips "hug the stripper 6' and thus blade 6' does indeed seal the opening to chute 24." Reply Br. 2 (citing Halder Fig. 2, 3:36–42).

Appellant also argues that Halder's disclosure that the elastic lips sealing the blade is to "prevent escape of the solids from the collection space." *Id.* at 3 (quoting Halder 3:41–42). Appellant contends that "the only way that solids could escape is if there were a lower air pressure outside of the collection space 4." *Id.* If Halder operates as the Examiner posits, Appellant argues, there would be no need for preventing the solids from escaping from the collection space "as the airflow would simply by pressure keep them in." *Id.* Appellant further contends that "[p]ressure is a force, which means it has directionality. The speed of the airflow in the direction through the filter causes a transverse (orthogonal) pressure of the airflow to become less in

order to conserve energy.” *Id.* For this reason, Appellant contends that the pressure outside of Halder’s collection space is actually lower and not higher as the Examiner asserts. *Id.* at 4.

We find Appellant’s arguments persuasive. The record supports Appellant’s assertion that Halder’s lips to the collection space seal the blade, which is contrary to the Examiner’s finding that “there is no indication that the blade 6’ seals the opening to the chute 4” (Ans. 15). Halder 3:35–42. Appellants also persuasively rebut the Examiner’s reasons for “at least a portion of the airflow is required to move a portion of the particulate matter into [Halder’s] chute” (Ans. 15) based on a pressure differential relative to the collection space or chute in Halder.

Appellant has, therefore, persuasively argued the Examiner’s determination that the blade of Halder directs airflow that carries at least some of the particulates into the exhaust chute is not supported by the record. Because we determine the facts and reasons relied on by the Examiner are insufficient to support a *prima facie* case of obviousness, we reverse the rejections of claims 1–13 under 35 U.S.C. § 103(a).

CONCLUSION

For the reasons stated above, we reverse the Examiner’s decision to reject claims 1–13.

DECISION

Each rejection is reversed.

ORDER

REVERSED